



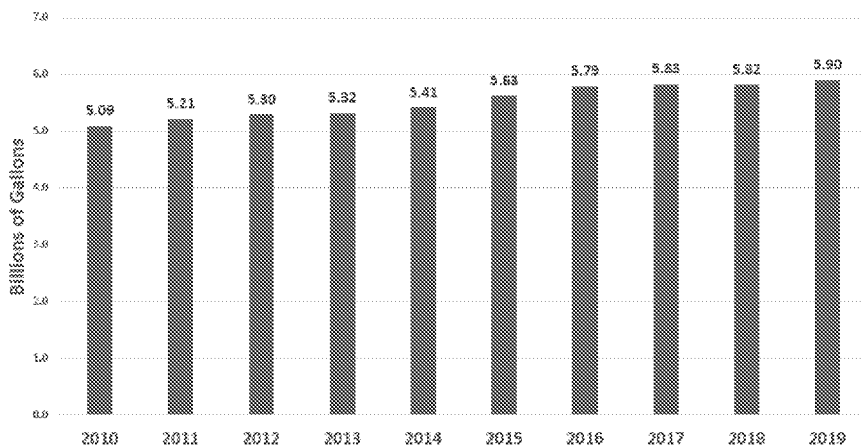
Biofuel Blending Is Up

EIA data shows no demand destruction from SREs

The biofuel industry, facing poor margins due to overproduction and declining exports, is trying various tactics to force more ethanol and biodiesel into the U.S. fuel supply. They currently claim that small refinery exemptions (SREs) — critical to protecting small fuel manufacturing facilities from disproportionate economic harm — are “destroying demand” for biofuels. **However, U.S. Energy Information Administration data shows no evidence of ethanol or biodiesel demand destruction this year versus last year. While SREs may have impacted the price of Renewable Identification Numbers (RINs), they have not impacted renewable fuels consumption. In fact, ethanol and biodiesel consumption are up this year compared to previous years.**

Reallocating SREs granted for 2018 would not be expected to impact renewable fuels consumption — but it would likely raise the cost of RINs and RFS compliance for fuel manufacturers and adversely affect small refineries that have demonstrated economic harm. The current SRE policy works for refiners with no impact to farmers and should be maintained.

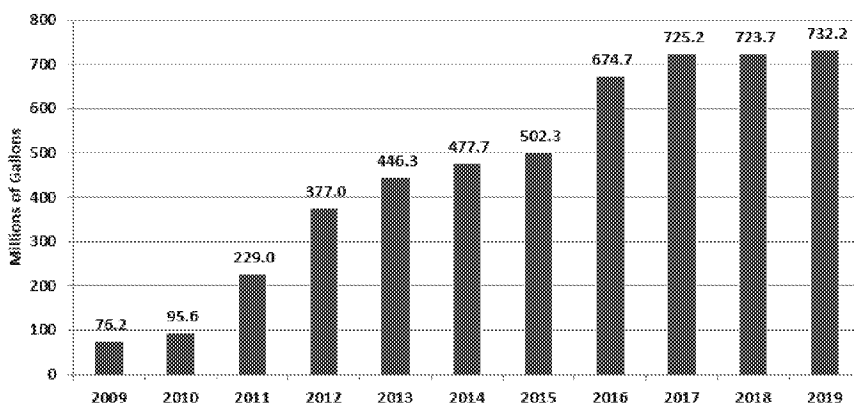
U.S. Ethanol Consumption January through May Cumulative



Total consumption of ethanol is up for the first five months of 2019 as compared with all prior years, **suggesting there has not been ethanol demand destruction from Small Refinery Exemptions (SREs) granted for years prior to 2018.**

U.S. Biodiesel Consumption January through May (cumulative)

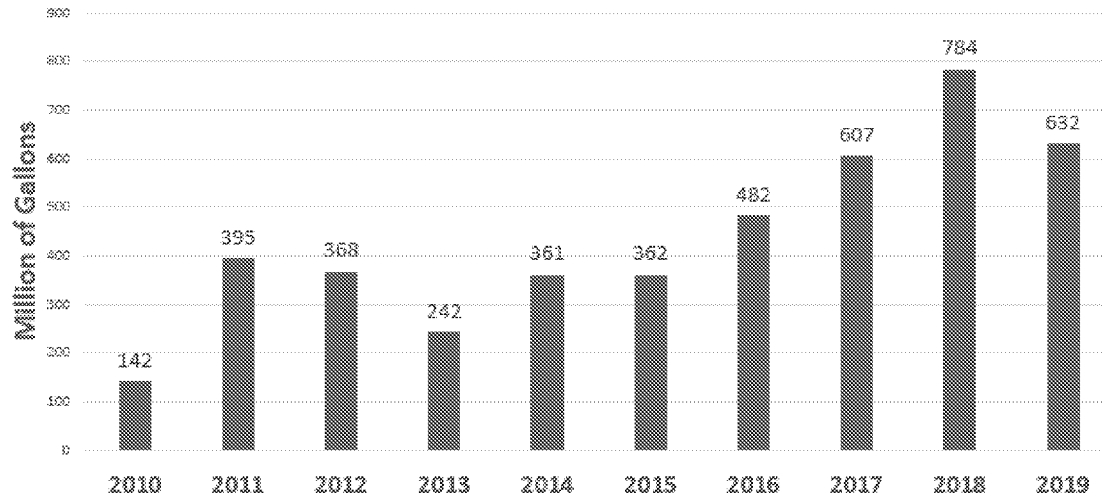
Source: EIA Monthly Energy Review/Monthly Biodiesel Production Report



Biodiesel consumption for the first 5 months of 2019 is up versus all prior years, **suggesting there has not been biodiesel demand destruction from SREs granted for years prior to 2018.**

Exports of ethanol are down by about 150 million gallons as compared with 2018.

U.S. Ethanol Exports January through May (Cumulative)



A comparison of current year average monthly D4 RIN price to monthly biodiesel consumption does not reveal a strong relationship. It shows periods of possible positive correlation but also periods of possible negative correlation.

Monthly U.S. Biodiesel Consumption Vs Monthly D4 RIN Price

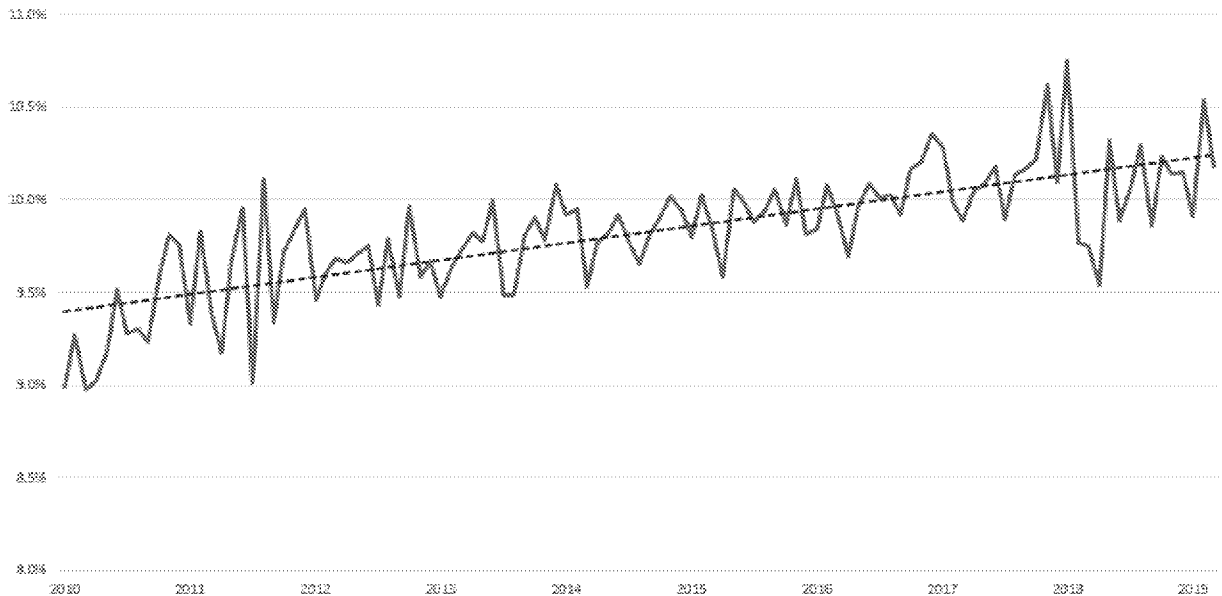


Sources: U.S. Energy Information Administration; Argus Media

APPENDIX

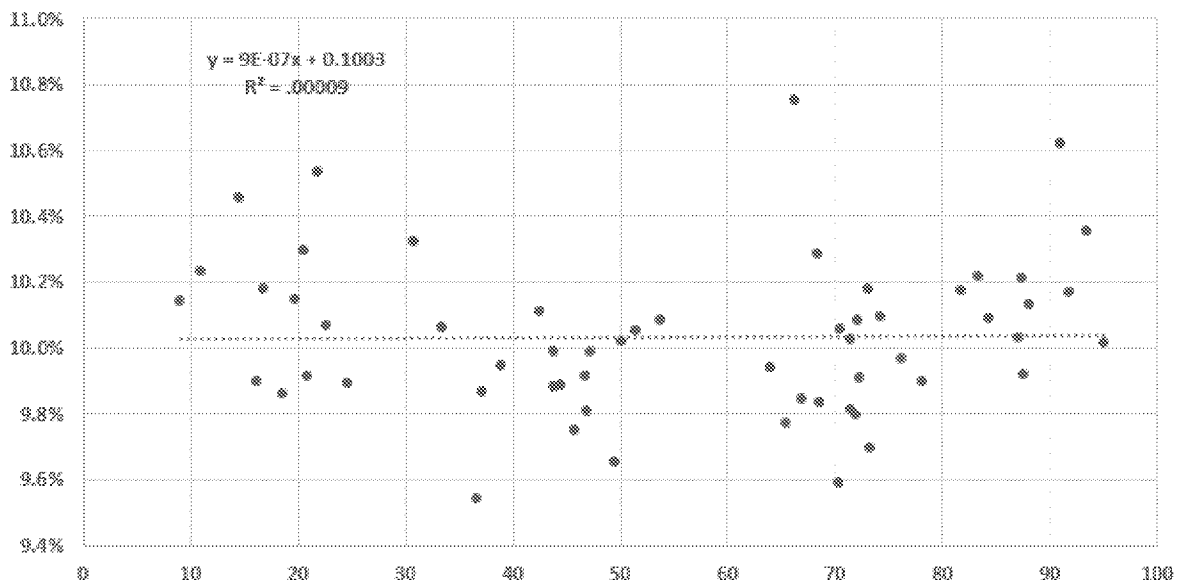
A simple linear trend line applied to the ethanol content of gasoline suggests it is increasing. There has been no statistically significant decrease in blending.

Ethanol Blend Rate



A scatter plot of D6 RIN prices against the ethanol blend rate reveals that there is no correlation between D6 RIN prices and ethanol blending.

Scatter Plot – Does not Suggest Correlation Current Year D6 RIN Price vs Ethanol Blend Rate



A regression analysis of D6 RIN price and the ethanol blend rate affirms no correlation – R Squared of .00009

Regression Analysis

SUMMARY OUTPUT: Ethanol Blend Rate a function of D6 RIN Price

Regression Statistics	
Multiple R	0.00925646
R Squared	0.00008568
Adjusted R Square	-0.017769931
Standard Error	0.00238313
Observations	58

R Squared suggests no correlation between Ethanol Blend Rate and D6 RIN Price

ANOVA

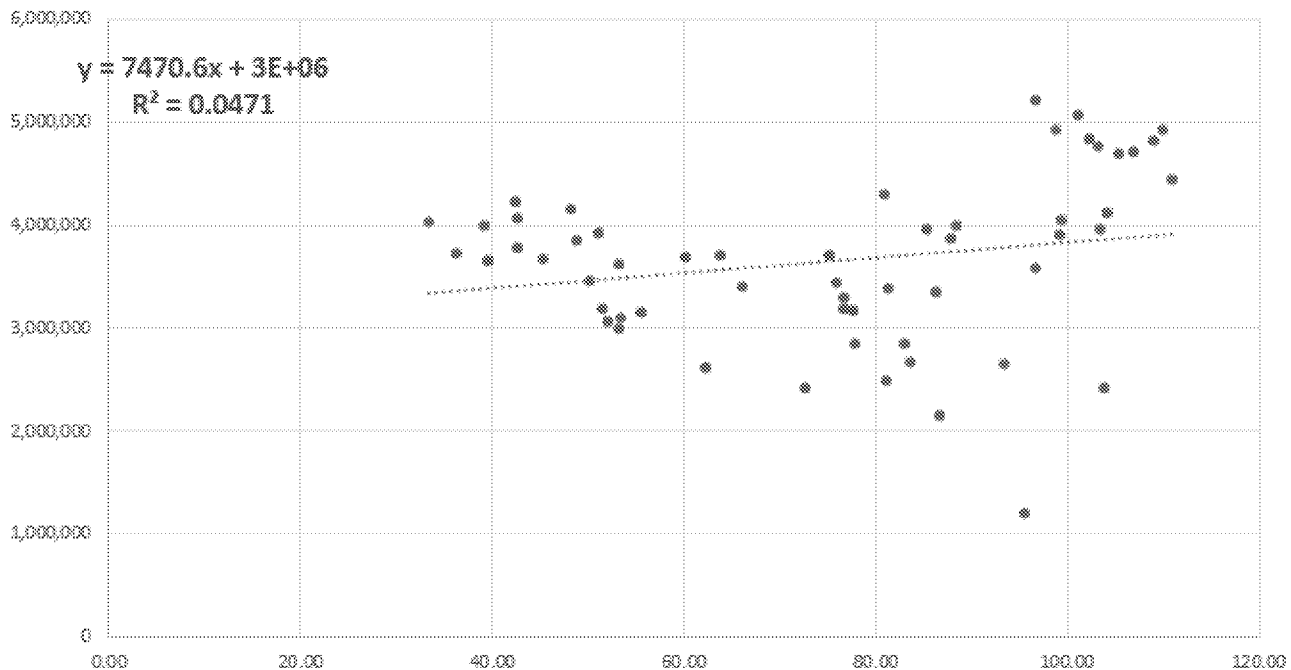
	df	SS	MS	F	Significance F
Regression	1	2.72528E-08	2.72528E-08	0.00479860	0.945019906
Residual	56	0.000318041	5.67931E-06		
Total	57	0.000318069			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.100278688	0.000756527	132.5513963	1.21233E-71	0.098763182	0.101794193	0.098763182	0.101794193
X Variable 1	8.63534E-07	1.24658E-05	0.069271971	0.94501990	-2.41086E-05	2.58356E-05	-2.41086E-05	2.58356E-05

R-squared (R²) is a statistical measure that represents the proportion of the variance for a dependent variable that is explained by an independent variable or variables in a regression model.

A scatter plot of D4 RIN price against biodiesel consumption does not reveal a strong relationship between D4 RIN price and biodiesel consumption.

Biodiesel Consumption & D4 RIN Price



A regression analysis suggests an R Squared of $\sim .05$ — almost no correlation.

Regression Analysis

Biodiesel Consumption & D4 RIN Price

SUMMARY OUTPUT

X=RIN Price Y = Biod Consumption

Regression Statistics	
Multiple R	0.217842933
R Squared	0.047455282
Adjusted R Square	0.029815565
Standard Error	23.07053805
Observations	56

R Squared suggests very minimal correlation between Biodiesel Consumption and D4 RIN Price

ANOVA

	df	SS	MS	F	Significance F
Regression	1	1431.88583	1431.88583	2.690251888	0.106776969
Residual	54	28741.4852	532.2497259		
Total	55	30173.37103			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	53.06581583	14.29768255	3.711483707	0.000486855	24.40048522	81.73074345	24.40048522	81.73074345
3596994	6.27871E-06	3.82802E-06	1.640198734	0.106776969	-1.396E-06	1.39534E-05	-1.396E-06	1.39534E-05

SUMMARY OUTPUT X=Price Y=Production

Regression Statistics	
Multiple R	0.261739884
R Square	0.068507787
Adjusted R Square	0.051571544
Standard Error	23.26536562
Observations	57

ANOVA

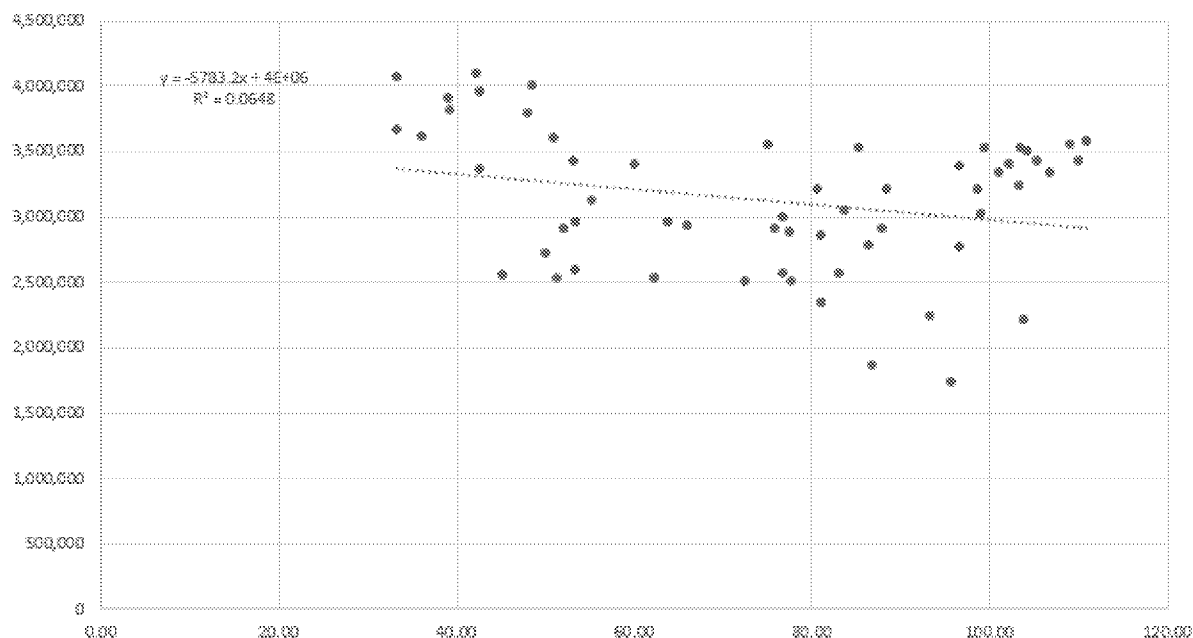
	df	SS	MS	F	Significance F
Regression	1	2189.490307	2189.490307	4.04504412	0.049212282
Residual	55	29770.24806	541.2772374		
Total	56	31959.73836			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	110.9904683	18.05187563	6.148417514	9.25425E-08	74.81370112	147.1672355	74.81370112	147.1672355
2952380.952	-1.14479E-05	5.692E-06	-2.011229505	0.049212282	-2.28549E-05	-4.08954E-06	-2.28549E-05	-4.08954E-06

A scatter plot of D4 RIN price against biodiesel production does not reveal a strong or consistent correlation between D4 RIN price and biodiesel production.

Linear Regression

Biodiesel Production & D4 RIN Price



A regression analysis suggests an R Squared of .06 — a very minimal correlation.

Regression Analysis

Biodiesel Production & D4 RIN Price

SUMMARY OUTPUT

X=Price Y=Production

Regression Statistics	
Multiple R	0.261739884
R Square	0.068507767
Adjusted R Sq	0.051571544
Standard Error	23.26536562
Observations	57

R Squared suggests very minimal correlation between Biodiesel Production and D4 RIN Price

ANOVA

	df	SS	MS	F	Significance F
Regression	1	2189.49031	2189.49031	4.04504412	0.049212282
Residual	55	29770.2481	541.277237		
Total	56	31959.7384			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	110.9904683	18.0518756	6.14841751	9.2542E-08	74.81370112	147.1672355	74.81370112	147.1672355
2952380.95	-1.14479E-05	5.692E-06	-2.0112295	0.04921228	-2.28549E-05	-4.08954E-08	-2.28549E-05	-4.08954E-08

Experts Agree: No Demand Destruction

Unpredictable costs associated with Renewable Fuel Standard (RFS) compliance are a reality for refiners in the United States, and debates about small refinery exemptions (SREs) must remain honest and grounded in data. Claiming that SREs cause “demand destruction” or price declines is not borne out in fact — the numbers don’t add up.

Government data and independent analyses confirm: SREs have not reduced demand for ethanol or deflated prices. Rather, overproduction of conventional biofuels and blend wall infrastructure challenges, along with international trade tensions impacting ethanol, are what’s affecting the marketplace. Withholding SREs to solve for non-existent demand destruction would inflict more pain on small refineries and potentially drive them out of business. No one benefits in that scenario — not refiners, not consumers and not farmers. Here’s what industry and economic experts are saying on the issue:

- “Data and economics point to increasing supply as the primary driver of low ethanol prices. Ethanol production in the U.S. looks to have topped 16 billion gallons for the first time in 2018 and this has simply been too much for the domestic (and export) fuel markets to absorb.” – **Scott Irwin, University of Illinois at Urbana-Champaign**, January 16, 2019
- “Updated analysis... shows even less evidence that the blend rate for ethanol has been reduced by SREs... The reason for this counter-intuitive result is that all but a tiny sliver of ethanol in the U.S. is consumed in the form of E10 and ethanol is very price competitive in the E10 gasoline blend.” – **Scott Irwin, University of Illinois at Urbana-Champaign**, December 13, 2018
- “Increased SREs and lower ethanol RIN prices have not caused ethanol demand destruction. This is supported by a review of RIN pricing economics and an analysis of ethanol blend rates, which have continued to increase after SRE announcements.” – **Charles River Associates**, September 15, 2018
- “Ethanol demand has suffered little due to EPA's recent approvals of small-refinery waivers to the Renewable Fuel Standard, a new analysis from a University of Illinois economics professor finds...The analysis may be a ray of light for farmers who are concerned about losing demand for their products due to a variety of trade issues and changes to the RFS, lower commodity prices and lower farm incomes.” – **Todd Neeley, reporter for DTN-The Progressive Farmer**, September 14, 2018
- “Analysis of data on ethanol and gasoline consumption in the U.S. shows there is little if any evidence that the blend rate for ethanol has been reduced by [small refinery exemptions].” – **Scott Irwin, University of Illinois at Urbana-Champaign**, September 13, 2018
- “There is no evidence of domestic biofuel demand destruction from RFS waivers to small refiners. Biofuel demand is robust and increasing, likely as a result of what RFA recognizes in its own analysis: the low price of ethanol relative to gasoline. As numerous studies have indicated, ethanol blending will remain economic, even in the absence of a mandate.” – **Joanne Shore, industry consultant**, September 11, 2018
- “Blend rate data still shows no demand destruction. Physical ethanol consumption is up this year.” – **Frank Maisano, senior principal for Bracewell LLP**, September 7, 2018

- “June 2018 Petroleum Supply data is in. Blend rate is 9.8 percent, just like June 2017 ... Still no correlation with RINs and biofuel blending.” – **Fueling American Jobs Coalition**, August 31, 2018
- “Trends indicate that the downturn in [ethanol industry] profitability cannot be traced to a downturn in usage ... The story behind the declining fortunes of the ethanol industry is straightforward. Domestic and export use for U.S. ethanol has increased nicely since 2014, but production capacity and actual production increased even faster. The surge in production basically overwhelmed the rise in use.” – **Scott Irwin, University of Illinois at Urbana-Champaign** March 14, 2018
- “I found two experts who've examined [if the RFS is essential for ethanol blending] in great detail: Paul Niznik, an analyst at Stratas Advisors, an energy consulting business in Houston, and Scott Irwin, an economist who teaches at the University of Illinois. And here's their bottom line: If the law changed tomorrow and gasoline companies were free to ignore ethanol, they'd almost certainly keep right on blending ethanol into their fuel. Got that? The ethanol mandate requires gasoline companies to do something that, at the moment, they'd do anyway.” – **Dan Charles, reporter for NPR**, February 10, 2016

Senators Agree: Current SRE Policy Works

Recently, nine U.S. Senators encouraged the administration to uphold the law and ensure that qualified small refineries continue to have protection from disproportionate economic hardship brought on by the Renewable Fuel Standard (RFS). This was in response to 12 Senate Democrats, five of whom cosponsored the Green New Deal, penning a letter urging the agency to cease issuing Small Refinery Exemptions (SREs).

Press Release: Sens. Cruz, Barrasso, Inhofe, Toomey, Kennedy, Wicker, Lee, Enzi, Cassidy Urge Administration to Uphold the Rule of Law and Block Senate Democrats' Efforts to Roll Back President Trump's Energy Independence Accomplishments

"I urge Administrator Wheeler and the administration to stand with hardworking refinery workers across this country and continue enacting policies that promote greater energy independence," Sen. Cruz said. "Under President Trump's leadership, America is now the number one energy producer in the world. Not only do these Democrats want to roll that back, four of them want to end oil production in this country all together. It is important to refinery workers across the country that these 12 Democrats do not undermine America's energy renaissance, and set the administration's policy on Small Refinery Exemptions. During his confirmation process, Administrator Wheeler expressed his commitment to following the law and continuing the legally required granting of SREs to those small refineries that qualify. It is my hope that Administrator Wheeler will uphold the rule of law and President Trump's promise to the thousands of blue collar workers whose jobs depend on reducing federal compliance costs for our nation's independent refiners."

"The Trump administration must protect America's small refineries," said Sen. Barrasso. "The Clean Air Act requires EPA to grant relief to any small refinery that suffers disproportionate economic hardship from the Renewable Fuel Standard. Under the Obama administration, EPA ignored the law and federal courts rebuked the agency. President Trump and Administrator Wheeler understand the important role small refineries play in keeping America energy dominant. We should all stand with small refineries and the communities they support."

"Energy independence and sticking by the hardworking men and women who make that possible is incredibly important to Americans-I know it's important to those who work in the oil and gas industry in Oklahoma and their families," Sen. Inhofe said. "Some of the same Democrats who cosponsored the far-fetched, radical Green New Deal that would eliminate more than 170,000 refining jobs are now urging Administrator Wheeler to ignore the law and take steps to further harm an industry that keeps America running. I know Administrator Wheeler sees this effort for what it is - another attack on fossil fuels and I urge him today to stand by the men and women who work hard every day in small refineries across the United States. I know he will."

"Refineries provide family sustaining wages to thousands of Pennsylvania workers," Sen. Toomey said. "EPA and the courts have made clear that waivers must be issued to refineries suffering severe economic harm from the ill-conceived corn ethanol mandate. The waivers simply diminish the burden of this terrible mandate on the refineries least able to afford it, and

therefore allow them to continue doing business. With this in mind, Administrator Wheeler and President Trump should continue working to bolster our flourishing energy sector, not undermine it."

"I've urged Administrator Wheeler to support our nation's refineries and preserve jobs by continuing to grant justified exemptions in accordance with the law," Sen. Kennedy said. "The energy industry is essential to Louisiana's economy and this nation's energy independence. The biofuel industry wants to rewrite the rules and force refineries out of business. That would kill jobs across Louisiana."

"Small refineries are an important part of our nation's energy infrastructure, employing thousands across our country and helping the U.S. maintain its leadership in energy production. The 12 Democrats that signed onto this letter have ignored the important economic role that oil production plays in driving our economy, particularly in rural areas. I urge EPA Administrator Wheeler to stand by his promises to our nation's small refiners and follow the intent of Congress to provide much-needed regulatory relief from the onerous requirements of the RFS program," Wicker said.

"Not only does oil production provide good paying jobs to thousands of hard working Americans, but under President Trump's energy dominance agenda the United States has become the world's top energy producer," Sen. Lee said. "I urge Administrator Wheeler to follow the law and uphold his commitment to continue granting waivers to small refineries that need regulatory relief to keep energy prices low and energy employment high."

"Wyoming is at the front and center of America's energy revitalization, and it's due in part to President Trump and Administrator Wheeler's commitment to our nation's energy independence," Sen. Enzi said. "Small Refinery Exemptions are an important part of reducing federal red tape and ensuring Wyoming's oil industry can flourish."

"Under the Trump administration's energy independent agenda, we've seen new investments bring billions to our country and create good-paying jobs for Louisiana refinery workers," said Dr. Cassidy. "We need to continue our effort to unleash American energy dominance, our independent refiners depend on it."